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10/601,652	06/24/2003	Masatoshi Yokota	0754-0192P	1286
2292 7590 08/02/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER HUNTER, ALVIN A	
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/601,652  
Filing Date: June 24, 2003  
Appellant(s): YOKOTA, MASATOSHI

**MAILED  
JUL 31 2007  
GROUP 3700**

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Andrew Meikle  
Birch, Stewart, Kolasch, & Birch, LLP  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 4/30/07 appealing from the Office action mailed 928/06.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5908358	Wu	06-1999
JP2002-078824	Iwami	03-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 6, 7, 9, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (USPN 5908358) in view of Iwami (JP 2002-078824).

Regarding claim 1, 2, 4, 6, 7, 9, and 11-13, Wu discloses a thermosetting urethane golf ball cover wherein the thermosetting urethane resin composition comprises an isocyanate group- terminated urethane prepolymer and a polyamine compound covering a core having a Young's modulus, also known as modulus of elasticity or stiffness modulus, from about 5000 to 100000 psi, or 34.5 to 689.5 MP, a (See claim 1 of Wu). In table 1, Wu shows examples of golf balls in which bear the cover of the present invention wherein it is shown that the covers have a hardness of 51 to 58 Shore D. From the above, a modulus of at least 102 to 116 MPa would satisfy the applicant's criteria, and therefore, would anticipate the above claims. Wu discloses that the types of polyurethane that may be used are of thermoplastic and thermoset type in which examples of how those types are made. Wu does not limit the polyurethane to having the types of isocyanates disclosed. Wu also established that alicyclic isocyanates, which inherently has color stabilizing characteristics, can also be used to produce thermoset polyurethane (See Column 5, lines 39 through 50). Wu discloses the use of

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4,4'-diaminodipheynlmethane but does not disclose the polyamine being 3, 3'-deithyl-5,5'-dimethyl-4,4'-diaminodipheynlmethane. Iwami discloses a golf ball having a cover of a polyurethane composition made of a isocyanate group-terminated urethane prepolymer and a polyamine wherein the isocyanate are 4,4'-dicyclohexylmethane diisocyanate, isophorone diisocyanate, etc., and the polyamine desired is 4, 4'-diaminodipheynlmethane and derivative thereof where 3, 3'-deithyl-5,5'-dimethyl-4,4'-diaminodipheynlmethane is noted as being a derivative thereof (See Paragraphs 0018 to 0026)). One having ordinary skill in the art would have found it obvious to use the above polyamine as taught by Iwami, within the composition of Wu in order to improve thermal resistance. Further, one having ordinary skill in the art would have found it obvious to use the above isocyanates, taught by Iwami, within the composition of Wu in order to improve weatherability, water resistance, and resilience.

Regarding claims 14-16, Wu through the examples show the cover having a thickness of about 1.3mm (See Table 1).

#### **(10) Response to Argument**

Appellant argues the following:

- 1) Wu does not suggest the cover satisfying a ratio;
- 2) The ratio can't be calculated accurately because Wu does not suggest the modulus;
- 3) Wu does not suggested the hardness equating to shear resistance;
- 4) Wu has no motivation to select the Young's Modulus;

5) Iwami has no motivation for combining the isocyanate and polyamine and is vague;

6) Wu teaches away; and

7) The basis of the combination of Wu and Iwami is hindsight.

The examiner disagrees.

Before rebutting the appellant's arguments, it should be noted that MPEP 1205.02 specifically states that the appeal brief should not incorporate or make reference to previous responses, in which the instant appeal brief contains.

With respect to the ratio of the stiffness to hardness not being satisfied by the Wu, appellant discloses within the background of the invention that the ratio of the stiffness modulus to the hardness of the material is well known. Appellant is arguing the issue because Wu does not explicitly recite a ratio of the stiffness to the hardness of the cover material. Wu discloses set parameters for the stiffness and discloses within Table 1 examples having particular hardness values. One skilled in the art reading the Wu reference would realize that the hardnesses within Table 1 would most likely be within the range of the stiffness designated by Wu. It should be noted that references are relevant for all with they disclose. Appellant has not taken into account the totality of what is disclosed by Wu.

Appellant believe that Wu does not teach the instant invention because the stiffness range is broader than the range claimed by the applicant. However, this is not true. One skilled in the art would know for reading Wu that the stiffness would be based on the curing agent employed in the composition. One skilled in the art would also

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know from reading Wu that the range disclosed by Wu would be adequate for improvement of the shear resistance. Based on the above, it would be easy for one having skilled in the art to optimize the stiffness range disclosed by Wu to find the most effective value.

With respect to the hardness relating to the shear resistance, this argument is not understood being that the shear resistance is dependent on the composition and not the hardness.

With respect the appellant not being able to accurately calculate the ratio, this is not seen, as noted above Table 1 of Wu discloses examples having hardnesses and the specification of Wu outlines that the composition must have a modulus within a particular range. From these to elements alone, one skilled in the art would be able to calculate the range in which the ratio of the stiffness modulus to hardness would encompass.

With respect to Wu teaching away, appellant is directing this argument to claim 13. Wu does not teach away because of the appellant's usage of the term "consisting essentially of". Attention should be directed to PPG Industries v. Guardian Industries Corp., 448 USPQ2d 1351. The focus of the case pertains to the whether "consisting essentially of" is adequately defined by the appellant. The term "consisting essentially of" is generally meant to exclude any elements that would materially affect the basic properties of the invention. The appellant discloses on page 9, second paragraph, of the specification of the instant application that the composition may contain any conventionally known catalysts in addition. The examples within the specification are

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not limiting. Based on the specification of the instant application, the appellant define "consisting essentially of" as constituting "comprising". Wu discloses two curing agent wherein one of which comprises an epoxy group and the other from N, N'-dialkyldiaminodiphenylmethane, and because of such would constitute "consisting essentially of" and would not constitute teaching away.

With respect to Iwami, it is not seen how Iwami is vague and motivation is lacking. Iwami discloses that the isocyanate and polyamine are essential for improving feel, distance, control, as well as hardening processing such that the would layer is not deteriorated. Obviousness only requires a reasonable expectation of success and predictability and because of such is analogous no matter how vague the applicant believes the prior art to be.

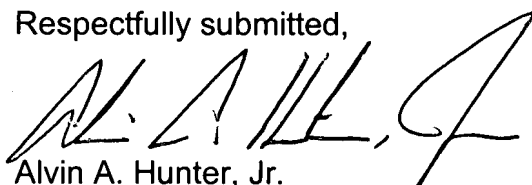
In conclusion, the above gives reason has to why the combination has not been made in hindsight. Each

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,




Alvin A. Hunter, Jr.

Conferees:



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